CHAPTER 1 GENERAL

1.1 Using this installation guide

Wireless Field Interface (WFI) adds wireless capability to the existing Servo or Radar Gauge by supporting BPM Protocol, Compliance with ISA100 standards. The Wireless field interface can communicate with Servo or Radar Gauge through Honeywell Enraf field bus Bi-Phase Mark, Process the data and forward that information wirelessly to the OneWireless server compliant with ISA100 standards.

1.2 Related documents

- Wireless Field Interface Safety instructions for installation, commissioning, operation, and maintenance
- Wireless Field Interface Service Manual
- Control drawings for FM and CSA

1.3 Target Audience for this Manual

This manual is intended for engineers and technicians, who are assigned to install, commission, and service the WFI. Also, all Honeywell Enraf customers who use wireless devices.

1.4 Contact

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CHAPTER 2 SAFETY

2.1 Safety Conventions

2.1.1 Warnings

The following warning mark is used in this manual to urge attention in order ***to prevent personal injuries or dangerous situations***, further described in this document.

Symbol	Description	Remark
	General warning	Will always be explained by text.

2.1.2 Cautions

The following caution mark is used in this manual to urge attention in order ***to prevent damages to the equipment***, further described in this document.

Symbol	Description
	General caution sign
	Electrostatic Discharge (ESD) sensitive device

2.2 Safety Instructions

2.2.1 General

WARNING! You must strictly follow the safety instructions mentioned in this manual and the safety instructions shipped with the WFI device for installation, commissioning, operation, and maintenance, for the safe operation of the WFI device.

The WFI may be located in explosion safety areas as follows:

USA (FM) **and Canada** (CSA)		**Canada** (CSA)		**Rest of the World** (ATEX / IECEx)	
Safety level	**Remarks**	**Safety level**	**Remarks**	**Safety level**	**Remarks**
Class 1, Division 1	 *WARNING!* Do NOT open when an explosive atmosphere may be present.	Zone 1	 *WARNING!* Do NOT open when an explosive atmosphere may be present.	Zone 1	 *WARNING!* Do NOT open when an explosive atmosphere may be present.
	 *CAUTION!* Seal conduit within 18 inches.		 *CAUTION!* Seal conduit within 18 inches.		
Class 1, Division 2	 *WARNING!* Do NOT open when an explosive atmosphere may be present.	Zone 2	 *WARNING!* Do NOT open when an explosive atmosphere may be present.	Zone 2	 *WARNING!* Do NOT open when an explosive atmosphere may be present.
	 *CAUTION!* Seal conduit within 18 inches.		 *CAUTION!* Seal conduit within 18 inches.		
Safe Area	-	Safe Zone	-	Safe Zone	-

2.2.1.1 EC declaration of conformity (for EU)

Refer to the EC declaration of conformity and the ATEX certificate(s), shipped with the WFI device.

2.2.1.2 Control Drawings for FM and CSA

Refer to the control drawings shipped with the WFI for FM and CSA.

2.2.1.3 Users

The mechanical and electrical installation must be performed only by trained people with the knowledge of the requirements for installation of explosion proof equipment in hazardous areas.

The entire installation procedure for the WFI must be implemented in accordance with national, local, and company regulations.

The entire electrical installation may be performed in accordance with the national requirements for electrical equipment to be installed in hazardous areas.

NOTE: See EN IEC 60079-14 document for more information.

2.2.1.4 Additional information

For additional information about Honeywell Enraf solutions, see the back cover of this manual to contact Honeywell Enraf or its representative.

2.2.1.5 Environmental Conditions

The environmental conditions regarding the permissible ambient temperature for the WFI is -40 °C to +65 °C (-40 °F to +149 °F). The relative humidity is RH 10 to 95%, non-condensing.

WARNING! Do not open the enclosure when an explosive atmosphere may be present.

2.2.2 Personal Safety

WARNING! In hazardous areas, it is compulsory to use personal protection and safety gear.
Safety can be achieved by using the following equipment:
1. Safety helmet
2. Fire-resistive overall
3. Safety shoes
4. Safety glasses
5. Working gloves
6. LEL-meter

Pay attention to the kind of product involved. If there is any danger to your health, wear a gas mask and take all the necessary precautions.

WARNING! Take appropriate precautions when chemical or toxic product vapors are present (compressed air, chemical protection suit, detection equipment).

2.2.2.1 General

2.2.2.1.1 Repairs and Maintenance

WARNING! Any repairs or parts replacements must be performed by the manufacturer or its appointed repair agent.

2.2.2.1.2 Opening of the Device

WARNING! It is forbidden to open the WFI device in an explosive hazardous environment in power.

WARNING! Treat the flange surface of the cover and the housing with care.
Keep the flange surface free of dirt.
The O-ring must be present and undamaged.

2.2.2.1.3 Tools

WARNING! Use non-sparking tools and explosion-proof testers. Use suitable explosion-proof tools (for example, testing devices).

2.2.2.1.4 Working Environment

WARNING! Avoid generation of static electricity. Make sure the explosive gas mixtures are not available in the working area.

2.2.2.1.5 Required Skills

WARNING! The technician must have technical skills to be able to safely install the WFI device. The technician also must be trained to work in accordance with the national requirements for electrical equipment in hazardous areas.

2.2.2.2 Commissioning

The commissioning of the device is conducted by qualified engineers trained by Honeywell Enraf and with the knowledge of the (local and national) requirements for electrical equipment in (potentially) explosive atmospheres.

2.2.2.3 Maintenance and troubleshooting

If the WFI device does not function accurately, only a qualified service engineer, trained by Honeywell Enraf and with the knowledge of safety regulations for working in (potentially) explosive atmospheres are allowed to repair the WFI device.

2.2.2.4 Grounding

- Make sure the housing of the device is properly connected to ground reference. See FIGURE 4-5 and FIGURE 4-6.
- Make sure the electrical resistance of the ground connections is below the maximum prescribed by local requirements.

2.2.3 Electrical

2.2.3.1 Safety Standards

- Do not open the enclosure when an explosive atmosphere may be present.
- The entire electrical installation must be in accordance with the International Standard EN IEC 60079-14 for electrical equipment in hazardous areas. Alternatively as per National Electrical Code (NFPA70) or Canadian Electrical Code requirements. All electrical installation is dependant on applicable national and/or local regulations.

- To comply with the IP66/IP67 requirements the stopping plugs, threaded adaptors, cable glands and their interface with the housing must also comply with IP66/IP67 requirements.
- In order to withstand the explosion pressure the bolts have to be fastened with a moment 16Nm (13.5 to 17.8 Nm). The bolts are captured types (property class A2-70 or better) and are not user replaceable. Contact Honeywell Enraf if you have or even suspect a need for replacement bolts.
- Use only Explosion proof (Ex d) compound cable glands or conduit seals, (choice between the two is dependent on local requirements). When using conduit seals, they shall be installed within 18 inches from the enclosure.
- Unused cable entries must be sealed with an approved threaded stopping plug. Thread type (metric or NPT) and sizes vary; consult the manual to make absolutely sure that the correct type is placed. Improper installation of cable glands, conduit or stopping plugs will invalidate the Ex approval.
- Intrinsically safe cabling may only be connected to the outside 5 pin socket. Connection of non-intrinsically safe signals will invalidate the approval. The electrical data of the intrinsically safe circuits is to be taken from the ATEX/IECEx certificate (numbers see below) which is shipped with the instrument.
- Accurate dimensions of the flame-proof joints must be used. Contact Honeywell Enraf for information regarding the dimensions of the flame-proof joints.

2.2.3.2 Accordance to Regulations

2.2.3.3 Explosion Safety

Approval	Certificate no.	Type of protection identification		
ATEX	DEKRA 13ATEX0214 X	Ⓔx II 2 G	Ex d [ia] IIB T6 Gb	T_a = -40 °C ... +65 °C (-40 °F ... +149 °F)
IECEx	IECEx DEK 13.0080X	Zone 1		
FM	Approval pending	Class I, Division 1	group C, D T6	
CSA	2680197	Class I, Division 1	group C, D T6	
		Zone 1	Ex d [ia] IIB T6	

2.2.3.4 Compliance to FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

2.2.3.5 Low-Voltage Directive

- The device is suitable for 2006/95/EC.
- The applicable standard value is IEC 61010-1 (3rd Edition).

2.2.3.6 Reference of Applicable Standards

Standard	Description
ATEX 95	Applicable for manufacturers of equipment used in places where explosion danger may exist.
IECEx	The IECEx System is an International Conformity System where a Mark of Conformity is granted by approved IECEx certifiers (ExCBs) located in IECEx participating countries for equipment that is covered by an IECEx Certificate of Conformity and hence has been tested and manufactured under systems that are under ongoing surveillance by ExCBs.
FM	Factory Mutual Approvals Division The Factory Mutual Approvals Division determines the safety and reliability of equipment, materials, or services utilized in hazardous locations in the United States and elsewhere.
CSA	Canadian Standards Association The standards generated by CSA are the cornerstone for determining a product's eligibility for certification in hazardous locations in Canada.

2.2.3.7 WFI Labels

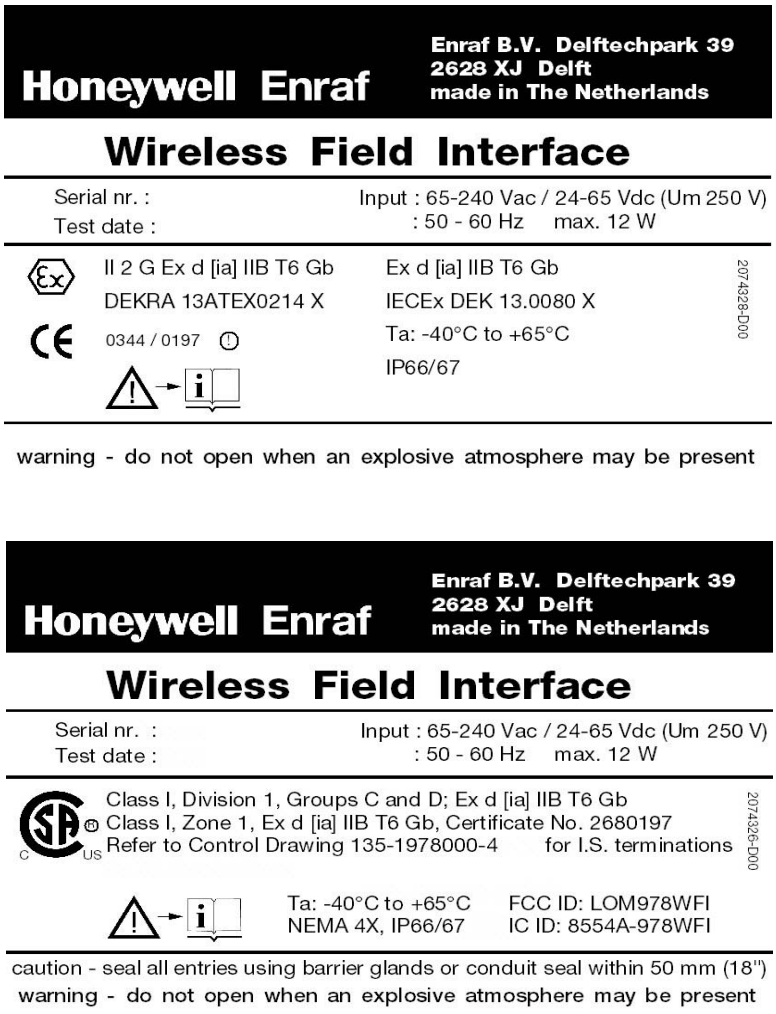
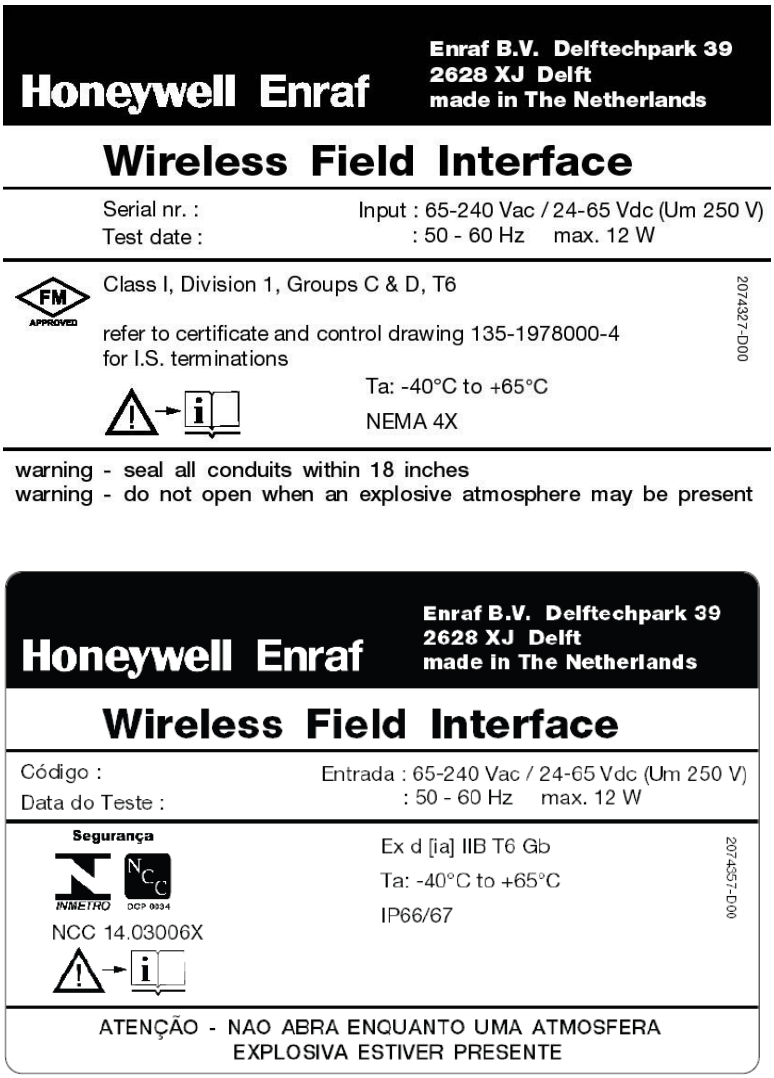


FIGURE 2-1 Identification labels with Safety note on the WFI



NOTE to FM label:

Ta = -40 °F to +149 ºF

FIGURE 2-2 Identification labels with Safety note on the WFI

2.3 Liability

The information in this installation guide is the copyright property of Honeywell International Inc. Honeywell International Inc. disclaims any responsibility for personal injury or damage to equipment caused by:

- Deviation from any of the prescribed procedures.
- Execution of activities that are not prescribed.
- Neglect of the safety regulations for handling tools and use of electricity.

The contents, descriptions, and specifications in this manual are subject to change without notice. Honeywell International Inc. accepts no responsibility for any errors that may appear in this manual.

Only certified technicians are authorized to make changes to the WFI configuration. All modifications must be in accordance with the guidelines as set forth by Honeywell International Inc. Modifications not authorized by Honeywell International Inc. invalidates the approval certificates.

CHAPTER 3 PRODUCT DESCRIPTION

3.1 Wireless Field Interface

The Wireless Field Interface (WFI) adds a wireless capability an existing servo or the radar gauge supporting the GPU protocol. This wireless communication is ISA100 compliant. It consists of multiple electronic boards, an antenna cable, and a communication antenna. The WFI communicates with the servo or the radar gauge through the Honeywell Enraf physical layer, processes the data, and forwards the information wirelessly to the Wireless Device Manager (WDM). The complete network including the WFI is based on the ISA100 wireless field device network.

There are different ways of communication which are as follows:

- The protocol tunnel (Engauge and Entis)
- Function blocks (Experion integration)

FIGURE 3-1 Wireless Field Interface (WFI)

3.2 SmartView

The SmartView is the basic tool in which the user can communicate with the WFI modules. The *SmartView* can be delivered as a portable tool and is optional. If you want to use SmartView then you can use a SmartView board (FII-SMV) as an optional board. WFI has a provision for an optional board.

FIGURE 3-2 Connecting WFI with Smartview

The SmartView is electrically connected to the Wireless Field Interface through a cable. The connections to the Wireless Field Interface are made inside the optional FlexConn module. The cable has four wires, a shield and an optional a ground wire.

Mount an M20 cable gland to the Standalone SmartView, and connect the other end to the external display connector located on the WFI device.

WARNING! Intrinsically safe cabling may only be connected to the outside 5 pin socket. Connection of non-intrinsically safe signals will invalidate the approval. The electrical data of the intrinsically safe circuits is to be taken from the ATEX/IECEx certificate (numbers see below) which is shipped with the instrument. Any deviation from the recommended FII-SMV cable routing or Coax Cable routing invalidates the Ex approvals.

3.3 FlexConn Modules

One of the main characteristics of the FlexConn architecture is the placement flexibility of the FlexConn modules. Inside the enclosure, the following modules are available.

- FII-SMV or optional Module
- HCI-1WL
- FCM-BPM
- CAN-PSX

One end of the terminating resistor is placed on the CAN-PSX module. The other end is placed on the optional module (FII SMV board), if it is in use.

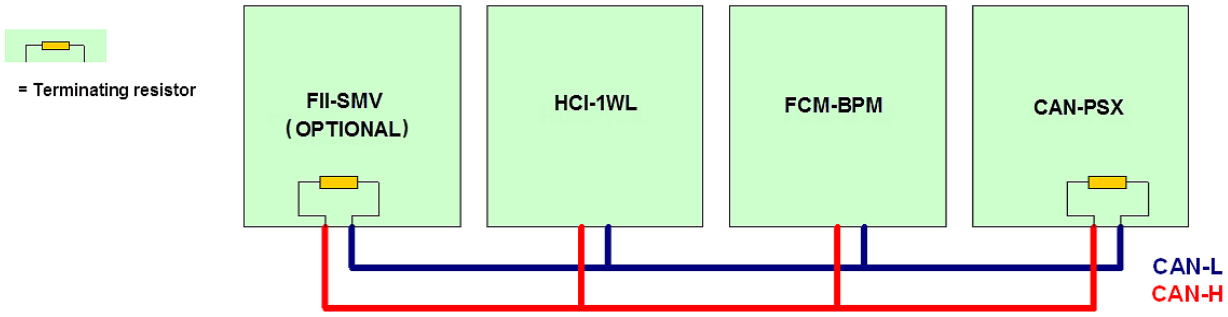


FIGURE 3-3 FlexConn CAN bus concept

If an optional board is not used, the other end of the terminating resister must be placed on the HCI-1WL module (the last module).

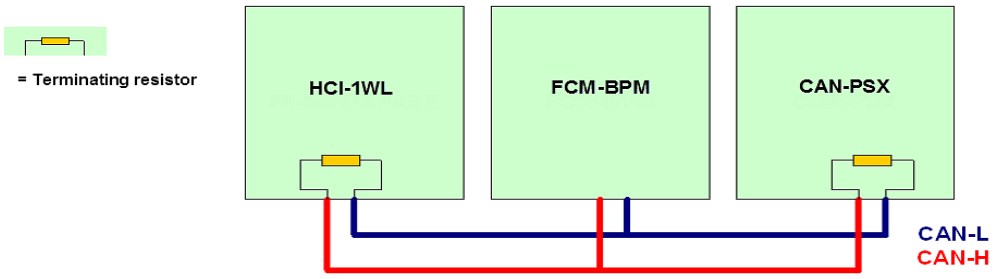


FIGURE 3-4 FlexConn CAN bus concept - Without optional board

The stack of modules are mounted on the DIN Rail and placed vertically inside the enclosure as shown in FIGURE 3-5.

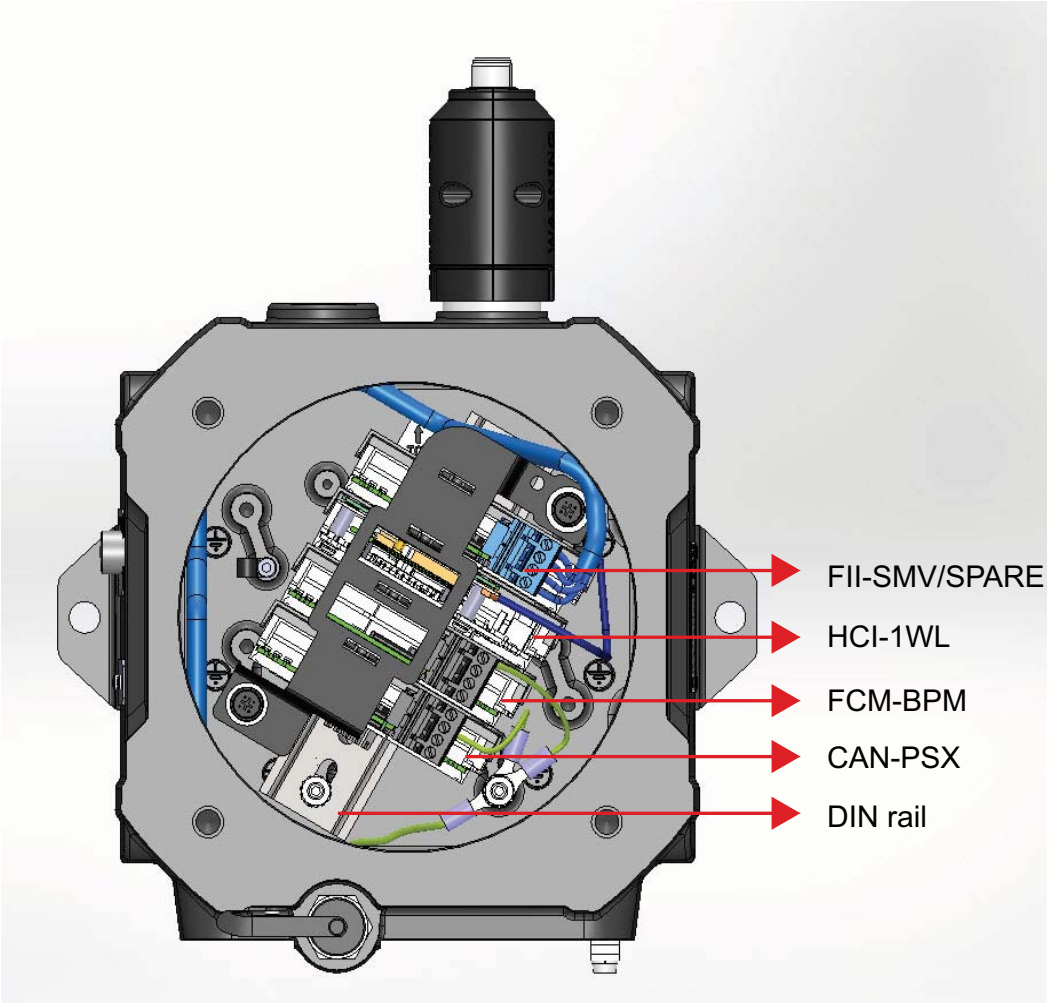


FIGURE 3-5 FlexConn board sequencing

Module	Description
HCI - 1WL	Combination of 1WL Main Board, radio board and Barrier Board
CAN-PSX	Generates the power of 15 V DC with auxiliary supply.
FCM-BPM	Provides an interface to a BPM based Enraf field bus to communicate with Servo/Radar Gauge.
FII-SMV	Connects the display type SmartView with a standard CAN bus.

3.4 Hardware Structure

3.4.1 Housing

The housing of the WFI device consists of a box and a lid, which can be removed by loosening 4 captive socket-head screws.

3.4.2 Interior

Within the rugged, sand-casted housing, the printed circuit boards of the WFI are stacked on a din rail using plastic board-retaining clips.

3.5 NPT Entries

The WFI has 2 flame proof and explosion proof 1/2'' NPT entries.

When selecting cable glands or installing conduits, take care to maintain the IP (Ingress Protection) value. See the type plate on the device.

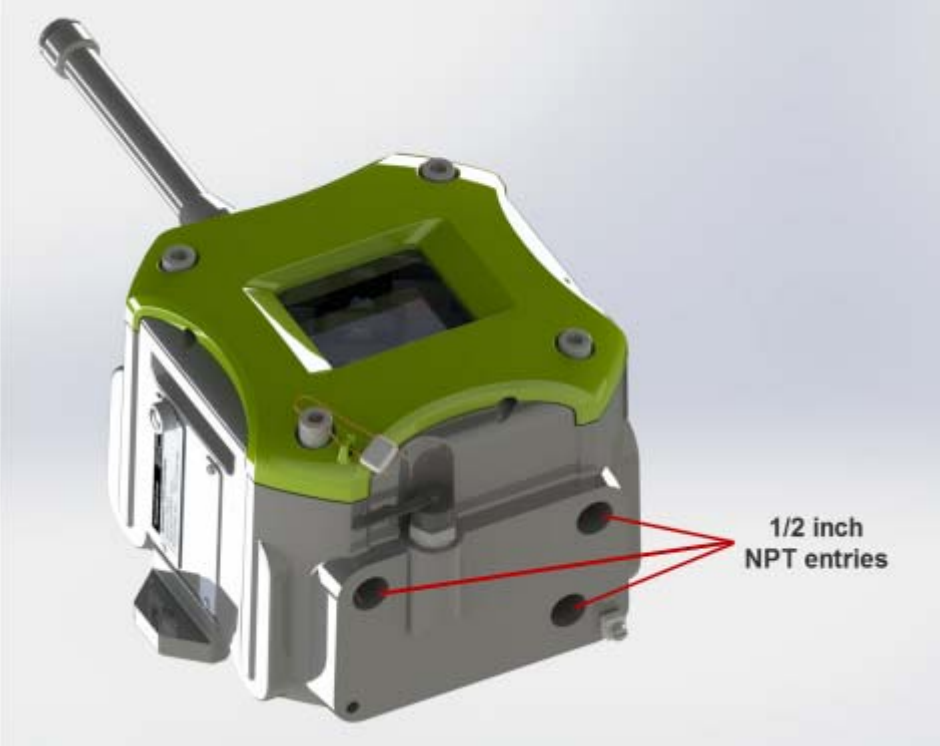


FIGURE 3-6 WFI NPT entries

NOTE: 1/2" NPT entries are provided by default. 3/4" NPT adaptors are provided on order.

The temperature rating of the glands must be at least 20ºC [68ºF] above maximum operating temperature.

Therefore, a rating of 85°C [185ºF] is suitable for the entire temperature range.

FIGURE 3-7 WFI fitted with a 3/4 inch gland adaptors

CAUTION

CAUTION! Only use explosion proof or flame proof certified materials of an appropriate IP value.

CAUTION

CAUTION! Unused cable entries must be sealed with an approved threaded stopping plug. Thread type (metric or NPT) and sizes vary; Improper installation of cable glands, conduit or stopping plugs will invalidate the Ex approval. If the SMV connector is removed or is not factory installed, the entry should be fitted with an approved flameproof stopping plug.

3.6 PCB Details

3.6.1 HCI -1WL board

The HCI-1WL board is used to interface data between a FlexConn system and the ISA100 network (including the antenna).

The HCI-1WL board occupies a single slot in the FlexConn rail and is a combination of 1WL Main Board, radio board and Barrier Board.

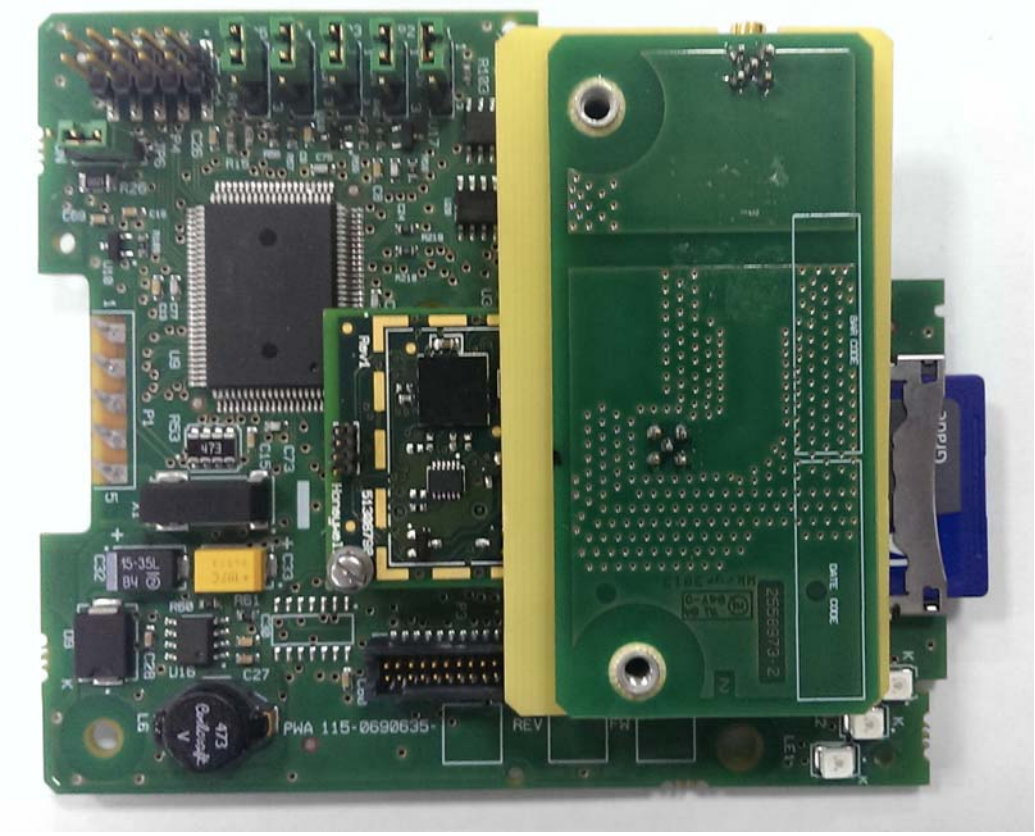


FIGURE 3-8 HCI-1WL board layout

3.6.2 FCM-BPM module

The FCM-BPM module provides an interface to a BPM based Enraf field bus. It is a communication board that is based on the Flexconn based radar or servo gauge. See FIGURE 3-8.

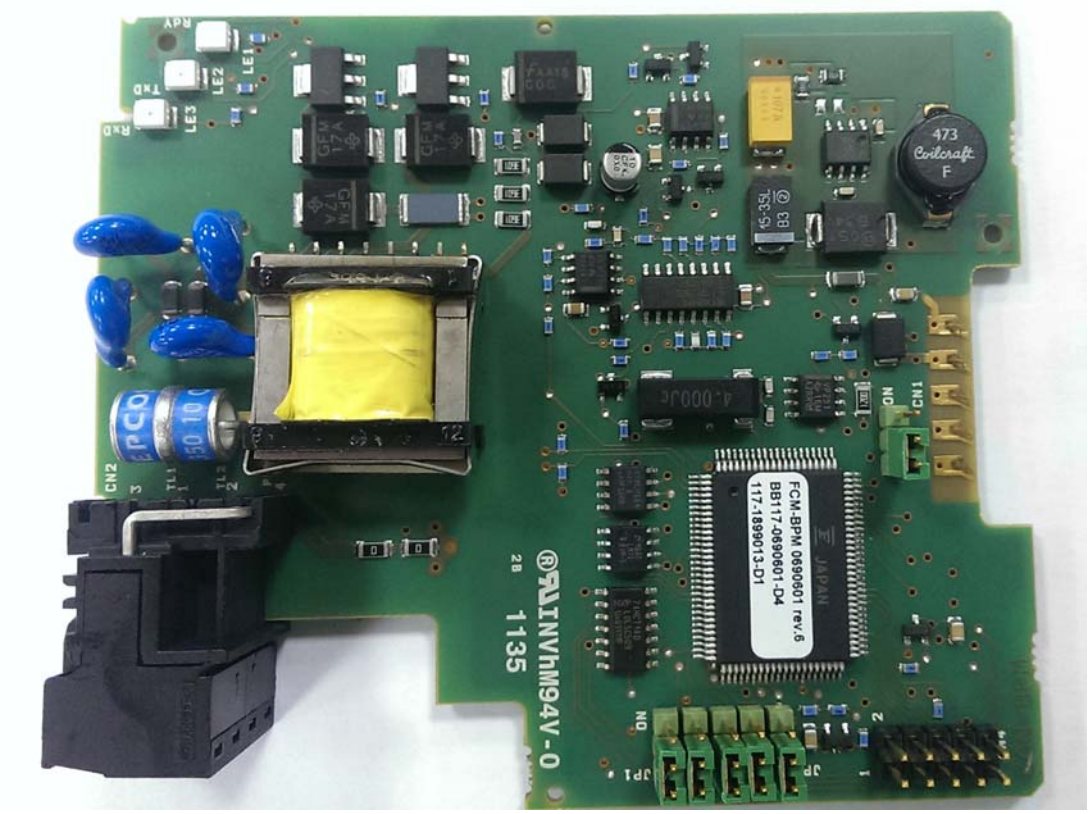


FIGURE 3-9 FCM-BPM board layout

3.6.3 FII-SMV (HMI-TSI)

The FII-SMV (HMI-TSI) module is intended to connect the display type SmartView with a standard CAN bus. The display is an intrinsic safe device. The interface module is located within an Ex d enclosure and provides intrinsic safe circuits for the supply and communication to the display module. See FIGURE 3-10.

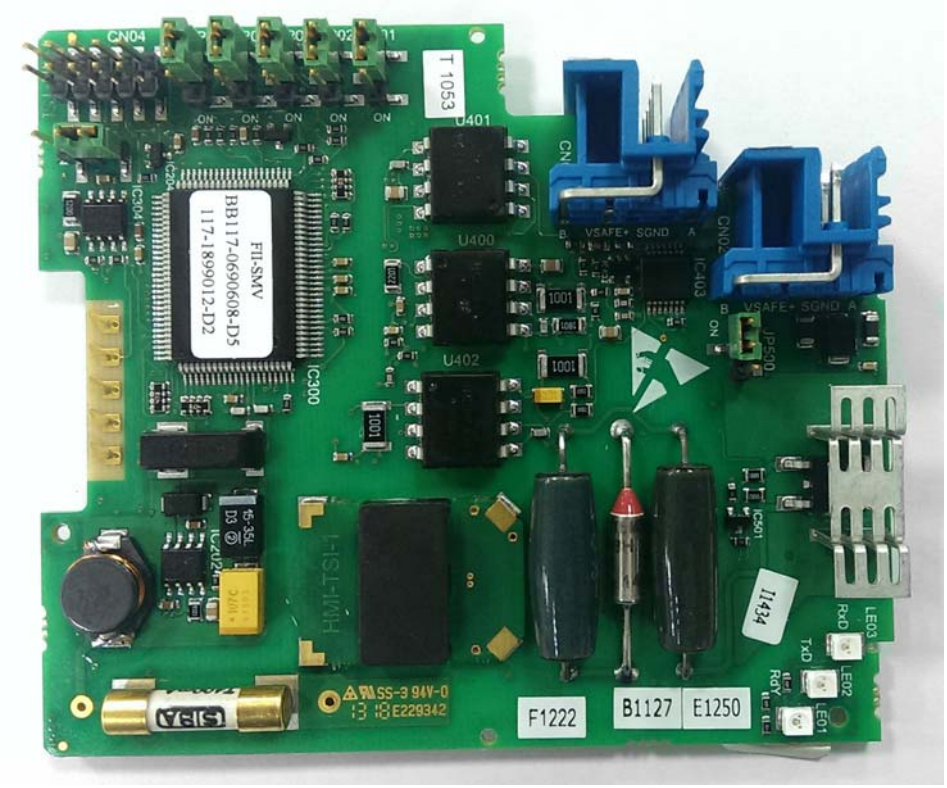


FIGURE 3-10 FII-SMV board layout

The module implements the following functions.

Function	Description
Supply 10 V	Safe_+ = 10V for the SmartView display module, isolated (Ex certified) Ex i parameters: U_O = 14.2 V I_O = 522 mA P_O = 1.7 W C_O = 4.37 µF L_O = 0.25 mH
RS485	RS485 for the SmartView display module, isolated (Ex certified)
Local service	Software, processing messages from/to the SmartView display unit and CAN-BUS
Display interface	Software, processing messages from/to the SmartView display unit and CAN-BUS

3.6.4 CAN-PSX module - Power Supply

The CAN Power supply (+15V DC) is intended to power up the FlexConn modules. See FIGURE 3-11.

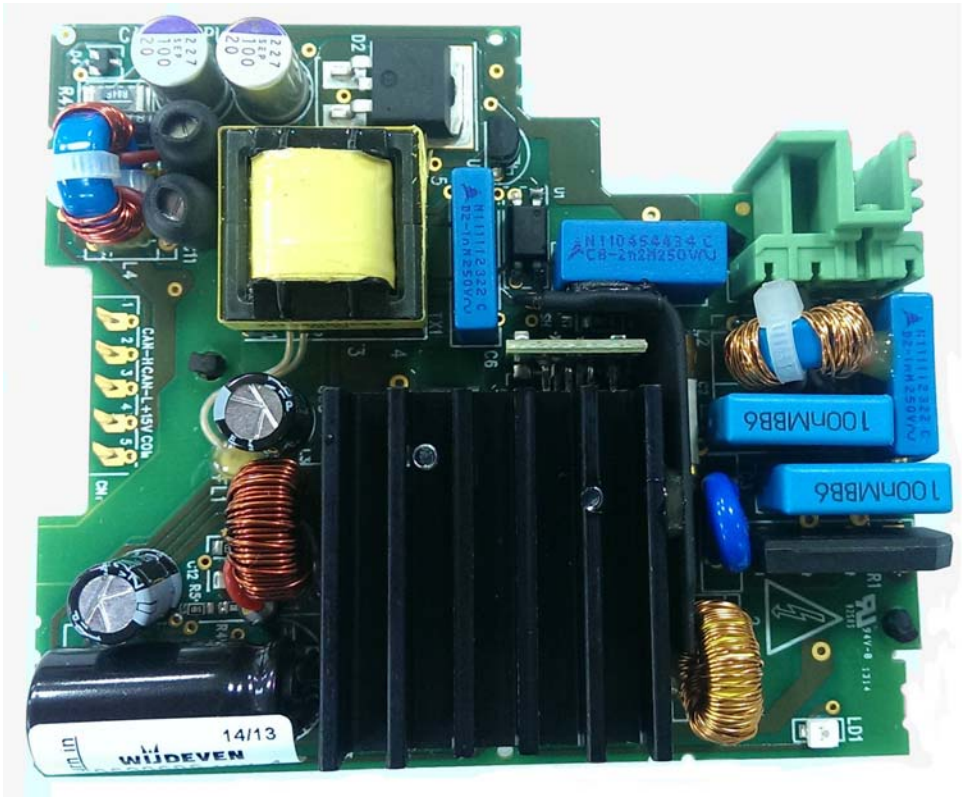


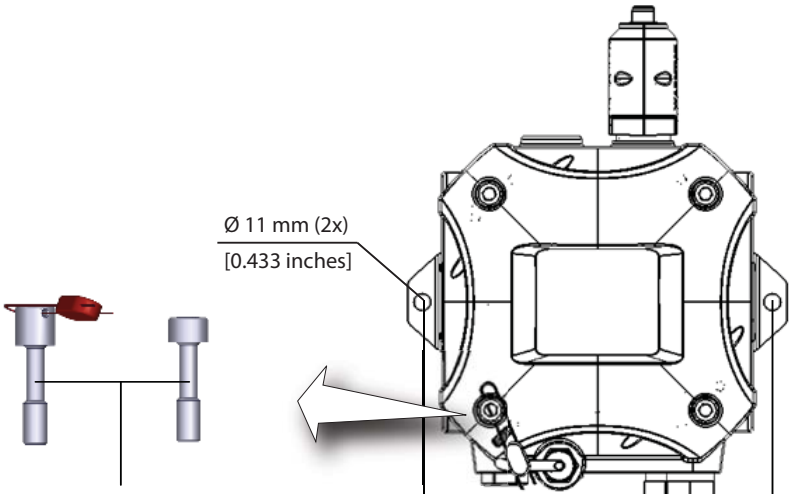
FIGURE 3-11 CAN-PSX board layout

The module implements the following specifications.

Item	Specification
AC Input Voltage Range	65 V - 240 V AC (+10% to -15%)
U_m	253 V_{ac} (refer to IEC 60079-11)
Input Frequency	50 Hz to 60 Hz ±10%
Input Fuse Value	1.25 A
Isolation Voltage	4.3 KV
DC Input Voltage Range	24 V - 65 V DC (+10% to -15%)
Output Voltage	15 V DC ± 4%
Continuous current	1 A

3.7 Device Features

3.7.1 Mechanical Features



Shaft: 7.50 h13 mm [0.295 h 0.512 inches]
Thread: M10x1.5 g6
Type: ISO 4762
Material: A2 70
Torque: 16 Nm [11.79 lb-ft]

FIGURE 3-12 Mechanical facilities of WFI

3.7.2 Environment

Parameter	WFI
Operating temperature	-40 °C ... +65 °C (-40 ºF ... +149 ºF)
Electronics designed	-40 °C ... +65 °C (-40 ºF ... +149 ºF) and RoHS[1]
Storage temperature	-40 °C ... +65 °C (-40 ºF ... +149 ºF)
Ingress protection	IP66 / IP67 / NEMA 4X

1. Restriction of Hazardous Substances

CHAPTER 4 INSTALLATION

4.1 Installation overview

4.1.1 Installing the WFI device

Installation of the WFI involves the following steps:

1. Remove the lid
2. Install the power cable
3. Install the BPM cable
4. Install the earth cable
5. Close the lid
6. Mount the WFI device
7. Mount the antenna

4.1.2 Installing WFI as a line powered router

Installing WFI is a line powered router involves the following steps:

1. Remove the lid
2. Install the power cable
3. Install the earth cable
4. Close the lid
5. Mount the WFI device
6. Mount the antenna

These steps are further explained in the following sections.

4.2 Removing the enclosure Lid

1. Remove W&M seal if applicable.
2. Loosen the 4 captive socket-head screws with an 8 mm Allen key.
3. Pull the lid and rotate gently to aid removal.See figure 4-1.

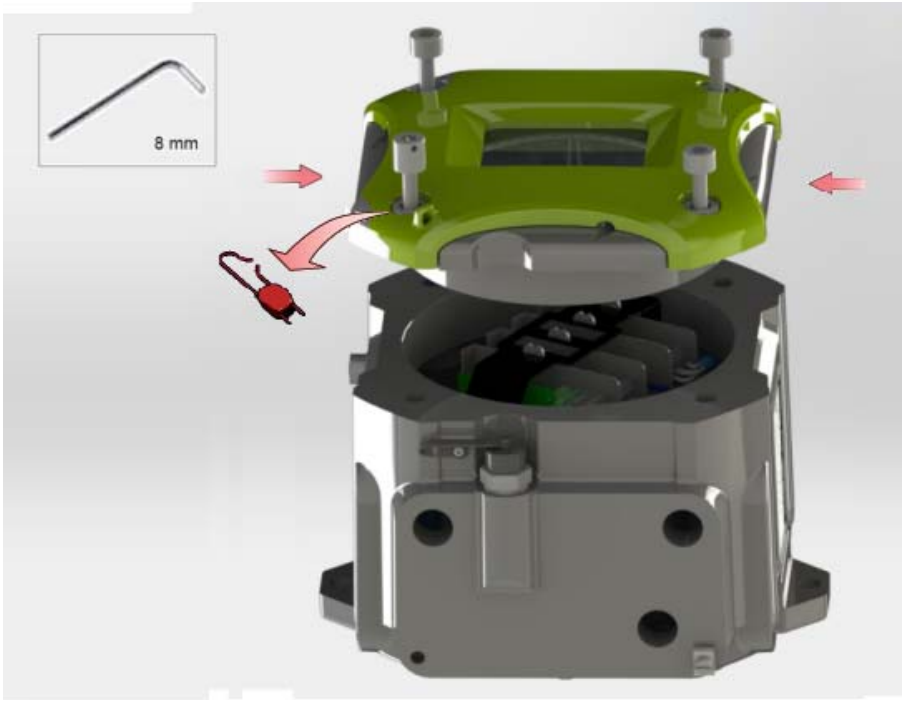


FIGURE 4-1 Removing the WFI lid

4. Make sure the O-ring is in place.
5. Place lid on a clean surface.

4.3 Install the power cable

The mains input enter the enclosure through a dedicated gland located at the bottom of the enclosure.

The mains input (Line and Neutral) cable wires terminate on the PSX module connector. The mains input earth wire terminates on one of the PE points provided inside the enclosure. From the PE point inside the enclosure, the PSX gets the PE connection through the wire terminated on the PSX connector.

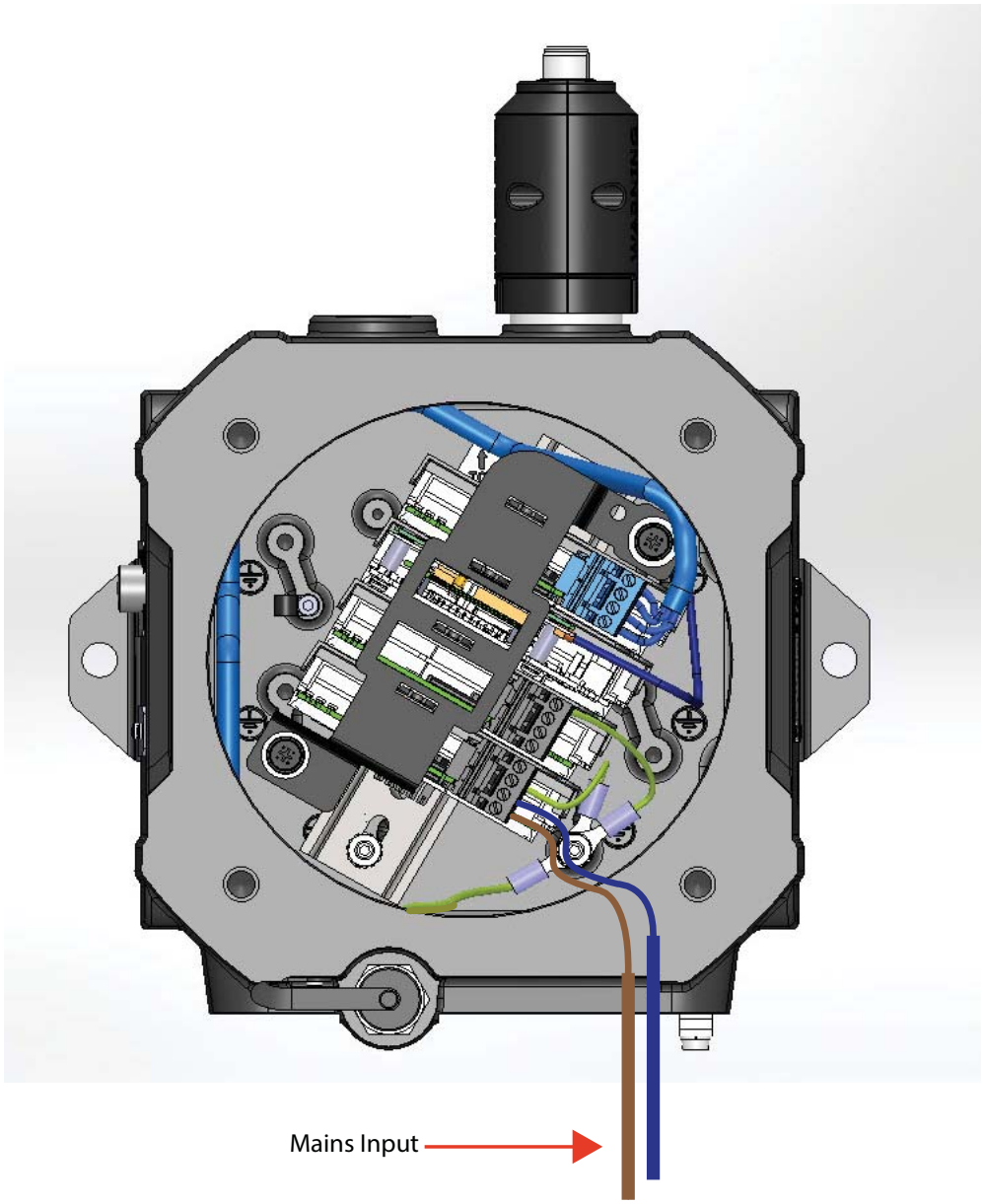


FIGURE 4-2 WFI - Mains cable wiring

The Mains or DC input cable must be connected and screwed on CAN-PSX Module (CN2 - Pin 1 and Pin 2). 3 Ferrite beads must be added on the mains input line.

The PE (CN2 – Pin No 3) of CAN-PSX module must be connected to the long ground bolt (provided for internal earth) by using serrated washers.

NOTE: The power supply can be routed through an external explosion proof junction box.

The mains and the BPM cable must be assembled with Ferrite tubes. Slip separate ferrite beads on the mains cable (3 ferrite tubes) and the BPM cable (2 ferrite tubes). See figure 4-3

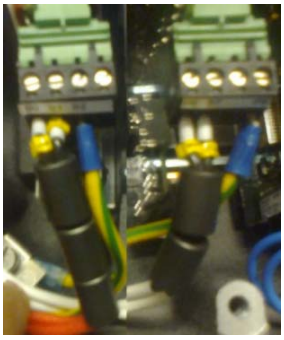


FIGURE 4-3 Ferrite tubes mounted on the wires

NOTE: Ferrite tubes are provided (in separate poly-bag) along with the W&M seal.

Ferrite tube specifications

Parameter	Value
Type	CST9.5/5.1/15-3S4
External diameter	9.5 +/-0.3 mm
Internal diameter	5.1 +/-0.15mm
Length	14.5 +/-0.45mm

NOTE: Field wiring can be done directly without removing the boards and metal bracket which are installed in the factory.

4.4 Install the BPM cable

The BPM signal lines enter the enclosure through a dedicated gland located at the bottom of the enclosure.

The BPM signal lines from the servo gauge terminates on the FCM-BPM module connector.

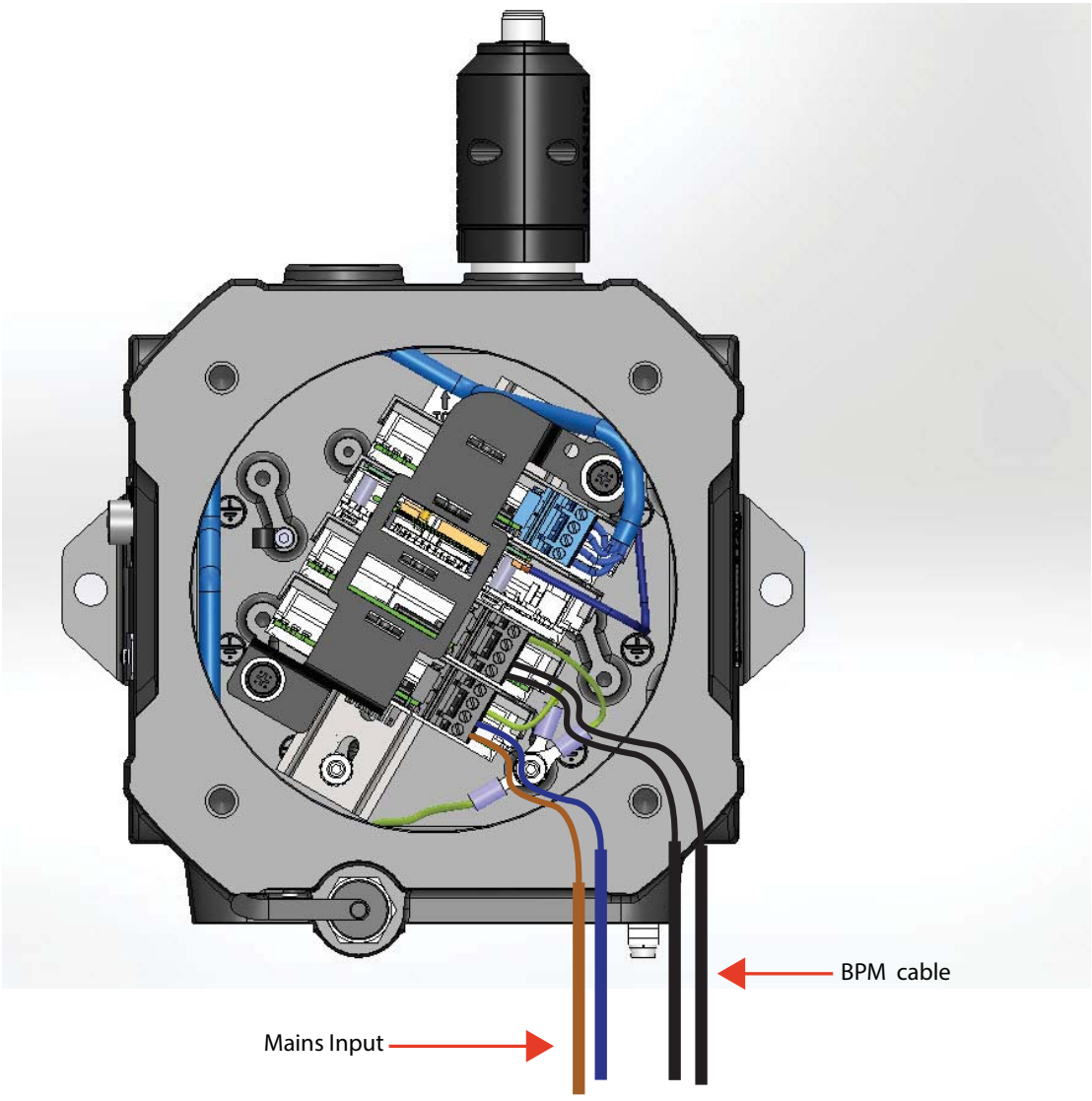


FIGURE 4-4 WFI - BPM cable wiring

The BPM cable coming from Gauge must be connected and screwed to CN2 on FCM-BPM Module. 2 Ferrite beads must be added on the BPM signal line.

The PE (CN2 – Pin No 4) of FCM-BPM module must be connected to PE mounting stud.

4.5 Install the earth cable

For convenience in connecting or disconnecting internal ground when all the boards in place, a long stud bolt is provided.

Connect Power Earth cable from PSX, Power Earth Cable from BPM and the Power Earth cable from SMV, to the long ground bolt by using serrated washers.

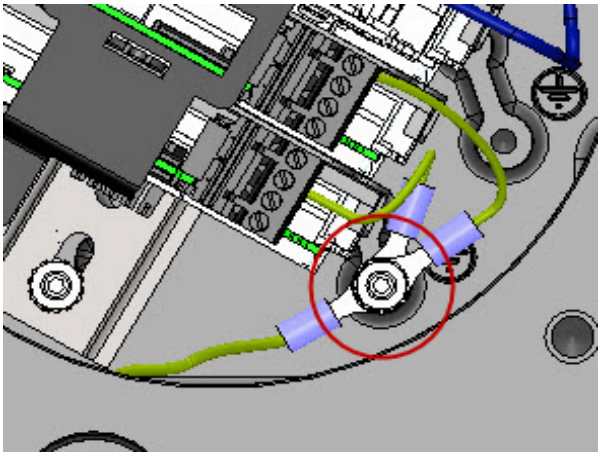


FIGURE 4-5 long Stud bolt for internal earth

One external point is available to connect to the field earth point

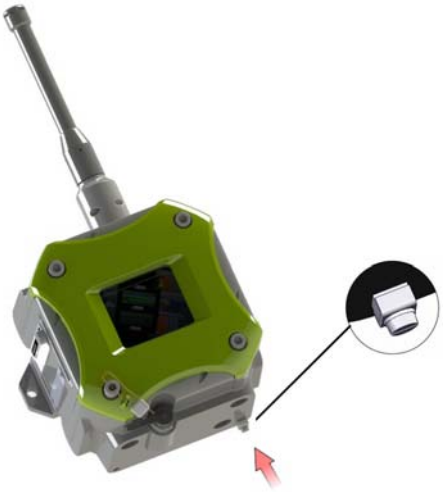


FIGURE 4-6 The grounding connections for the WFI

WARNING! Use of both internal and external protected earthing is required for maintaining explosion safety unless defined otherwise by national and/or local regulations.

The long ground bolt must be connected to the external field earth as shown in figure 4-7

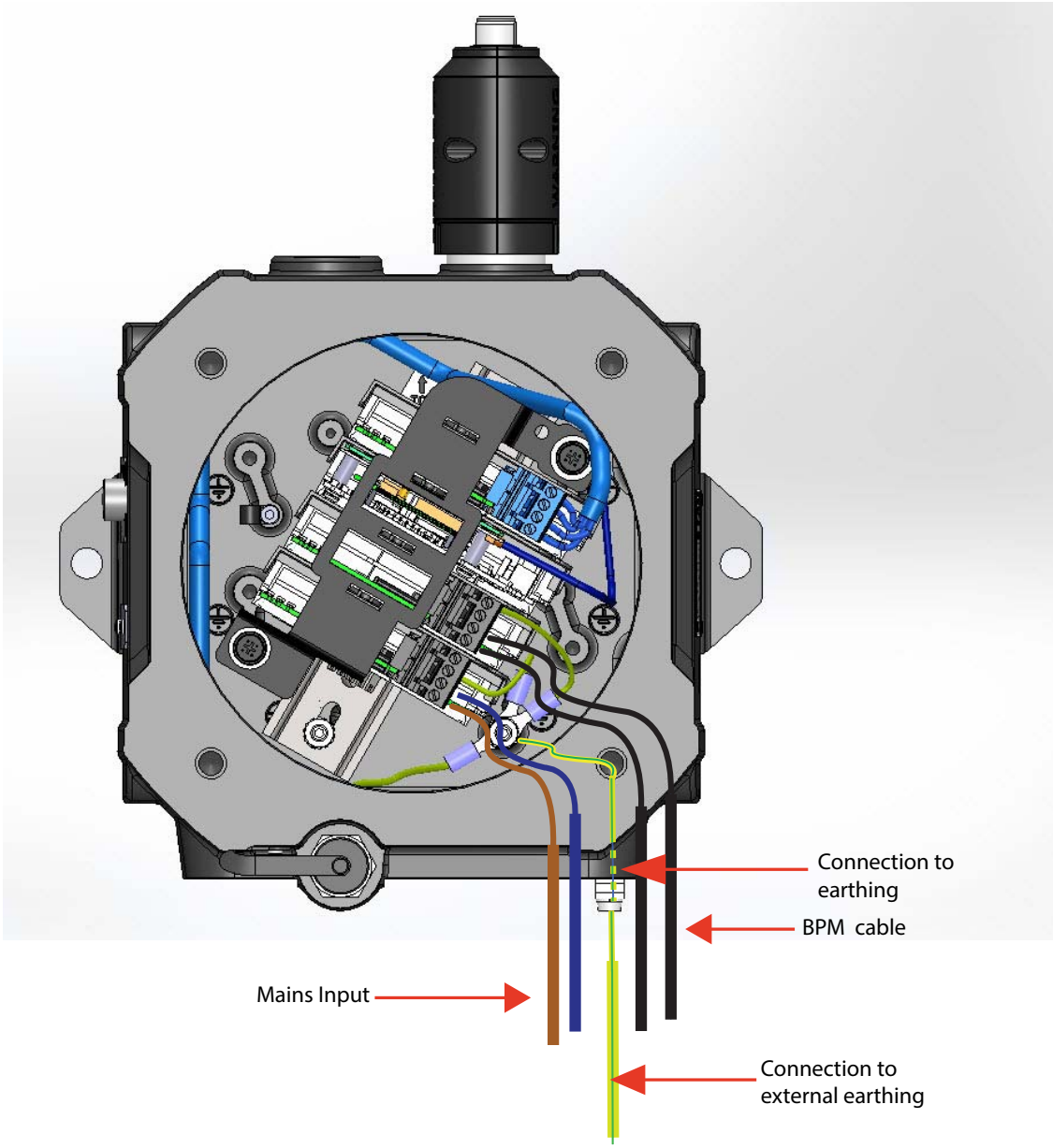


FIGURE 4-7 Connection to external earthing

WARNING! Use a cable gland with the appropriate IP grade. Use a cable gland which is equipped with a connection for the ground shield.

4.6 Replacing the Lid

1. Ensure the O-ring of the lid is in place and not damaged.
2. Ensure the spigot faces are not damaged or contain dirt.

CAUTION! Do NOT apply sealant to faces and minimize the use of grease!

3. Ensure cables are clear of spigot face when re-inserting the lid.
4. Rotate gently to aid insertion.
5. Mount the 3 captive socket-head screws, and the W&M bolt. W&M Bolt must be fastened close to the sealing post on Lid cover
6. Tighten the bolts with an 8 mm Allen key. Tighten with 16 Nm.

In order to withstand the explosion pressure the bolts have to be fastened with a moment 16Nm (13.5 to 17.8 Nm). The bolts are captured types (property class A2-70 or better) and are not user replaceable. Contact Honeywell Enraf if you have or even suspect a need for replacement bolts.

4.7 Mounting suggestions

The following mounting options can only be considered as suggestions. You may choose other appropriate mounting options as long as the WFI communication antenna is always pointing up.

- The WFI may be mounted on a pipe railing using a mounting bracket and M10 socket-head bolts or U-ring bolts. This mounting bracket is not a part of the WFI product.

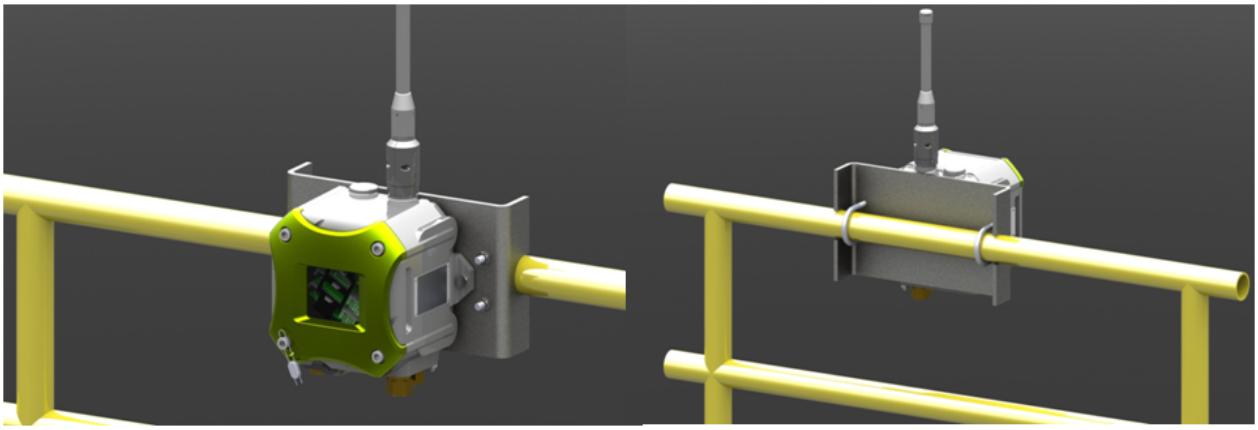


FIGURE 4-8 WFI mounted on pipe railing using a mounting bracket

- The WFI may also be mounted using a mounting bracket on a flange using M10 socket-head bolts. This mounting bracket is not a part of the WFI product.

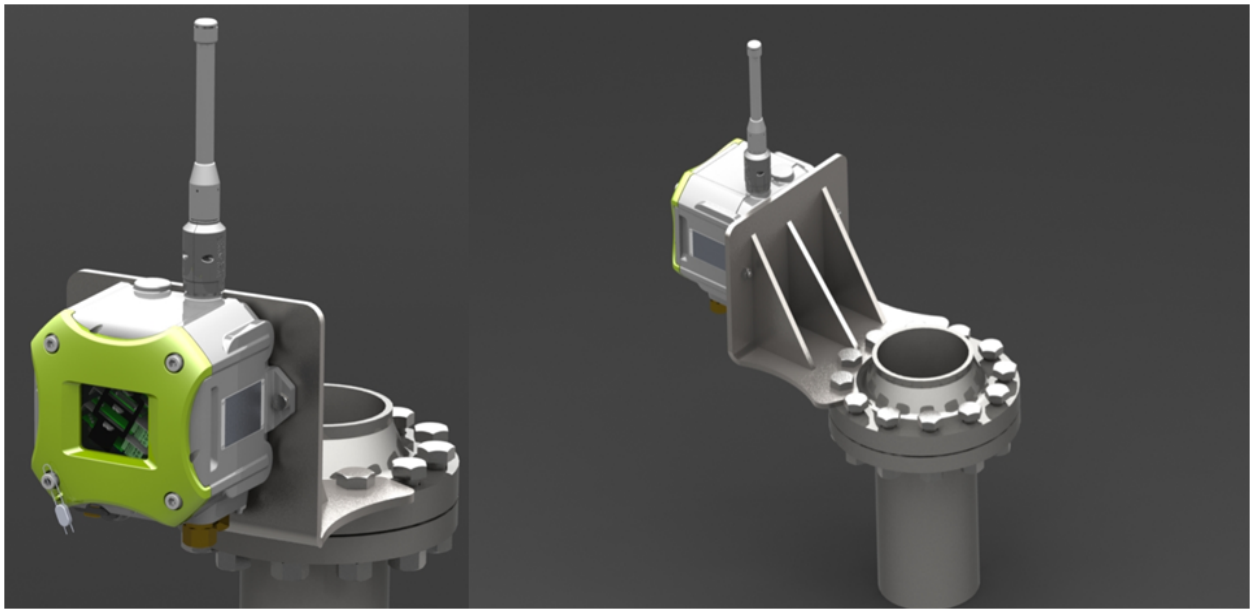


FIGURE 4-9 WFI mounted on a flange using a mounting bracket

- The WFI may be mounted on a 2”x2” square rail, using a mounting bracket and 2 square U-bolts.

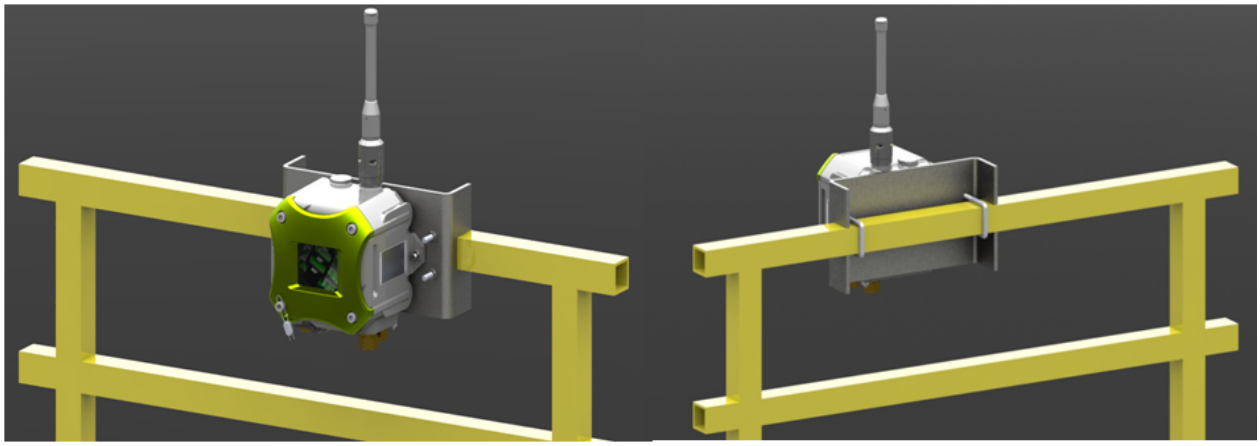


FIGURE 4-10 WFI mounted on a square rail

- WFI can also be mounted on a L angle (square) 2”x2” rail, using a mounting bracket and 2 square U-bolts. A square pipe can be fixed on the L section rail for uniform mounting.

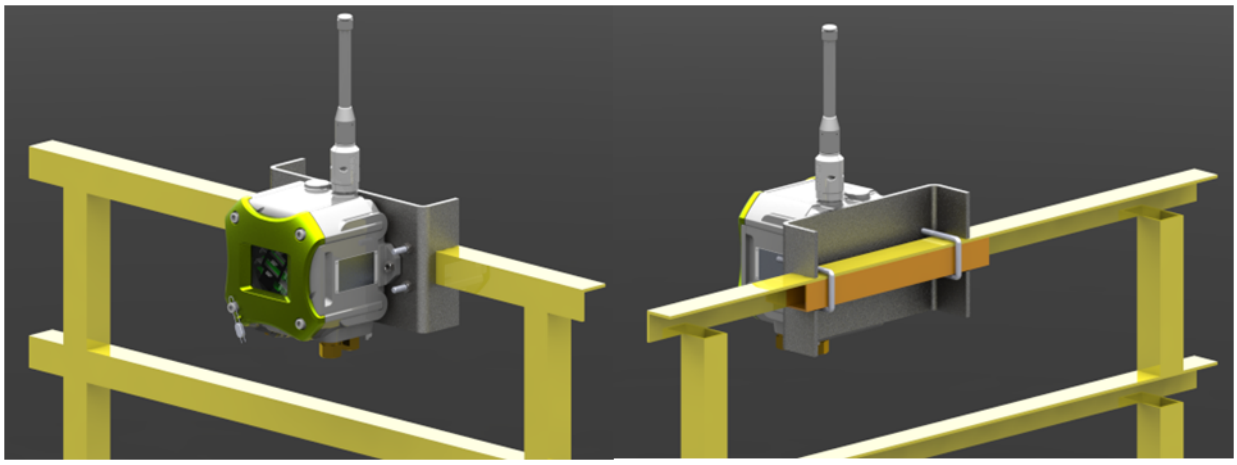


FIGURE 4-11 WFI mounted on a L angle square rail

4.8 Mounting the Antenna

The communication antenna is placed on top of the WFI enclosure as shown in the following figure. 4 dBi and 8 dBi integral antenna's are supported in WFI.

FIGURE 4-12 WFI antenna

WARNING! Static electricity explosion hazard: Do not wipe with dry cloth!

To mount the communication antenna on the WFI device, screw the communication antenna clockwise on the lightning arrestor. See FIGURE 4-13.

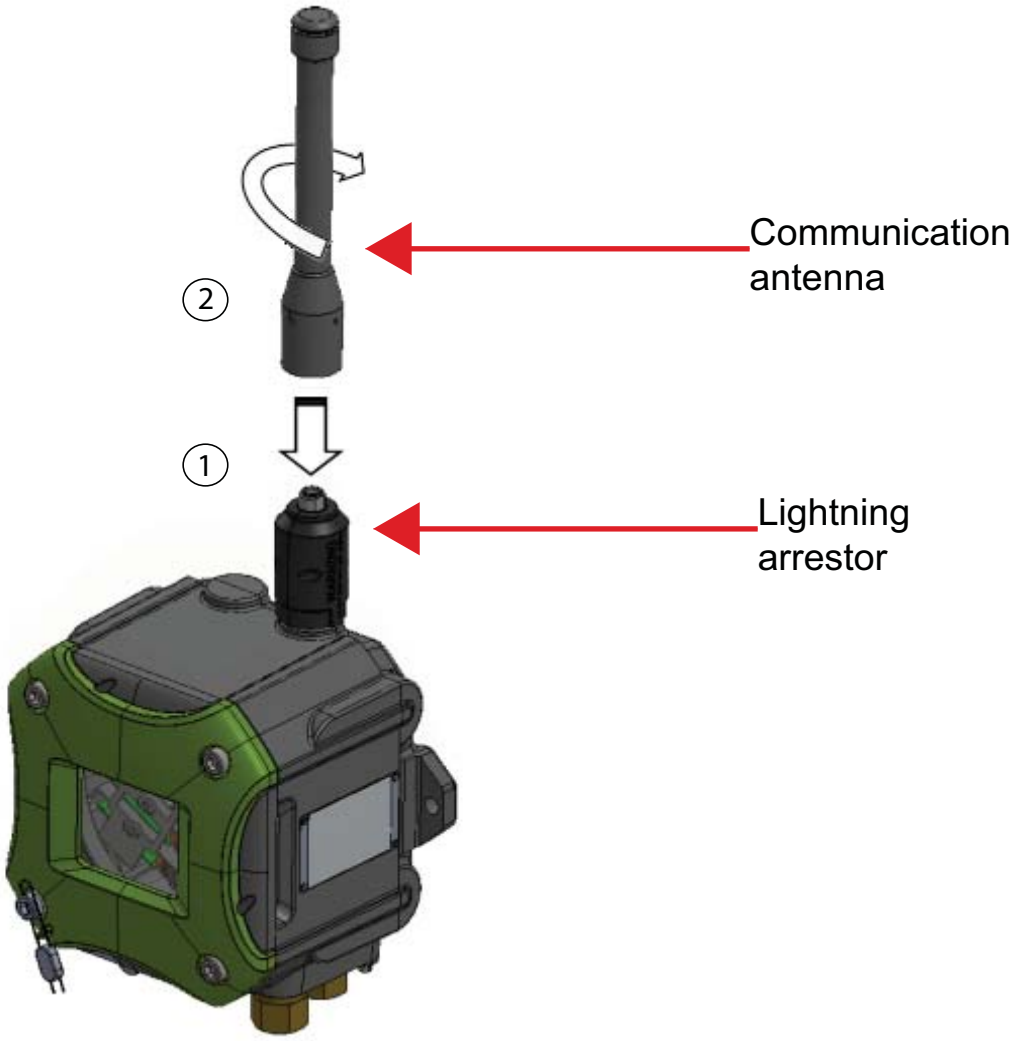


FIGURE 4-13 Mounting the communication antenna

NOTE: The lightning arrestor protects the electronics available in the device from damage caused by lightning. It also protects the device and can be replaced as a preventive maintenance action. The preventive maintenance interval depends on the location, position of the equipment, grounding, and other protection measures installed.

For more information about the antenna types supported, refer to the *Wireless Field Interface Service Manual*.

In case you want to un-mount the antenna, unscrew the existing communication antenna in a counter-clockwise direction at its base until the antenna separates from the lightening arrestor.

CHAPTER 5 TECHNICAL DATA

5.1 Weights and Dimensions

Following are the mechanical features of the WFI.

1. An enclosure box with a lid which can be mounted by means of 2 x M10 socket-head bolts.
2. The width is 206mm (8.11 inches), depth is 169mm (6.654 inches), and the height is 212 mm (8.346 inches).

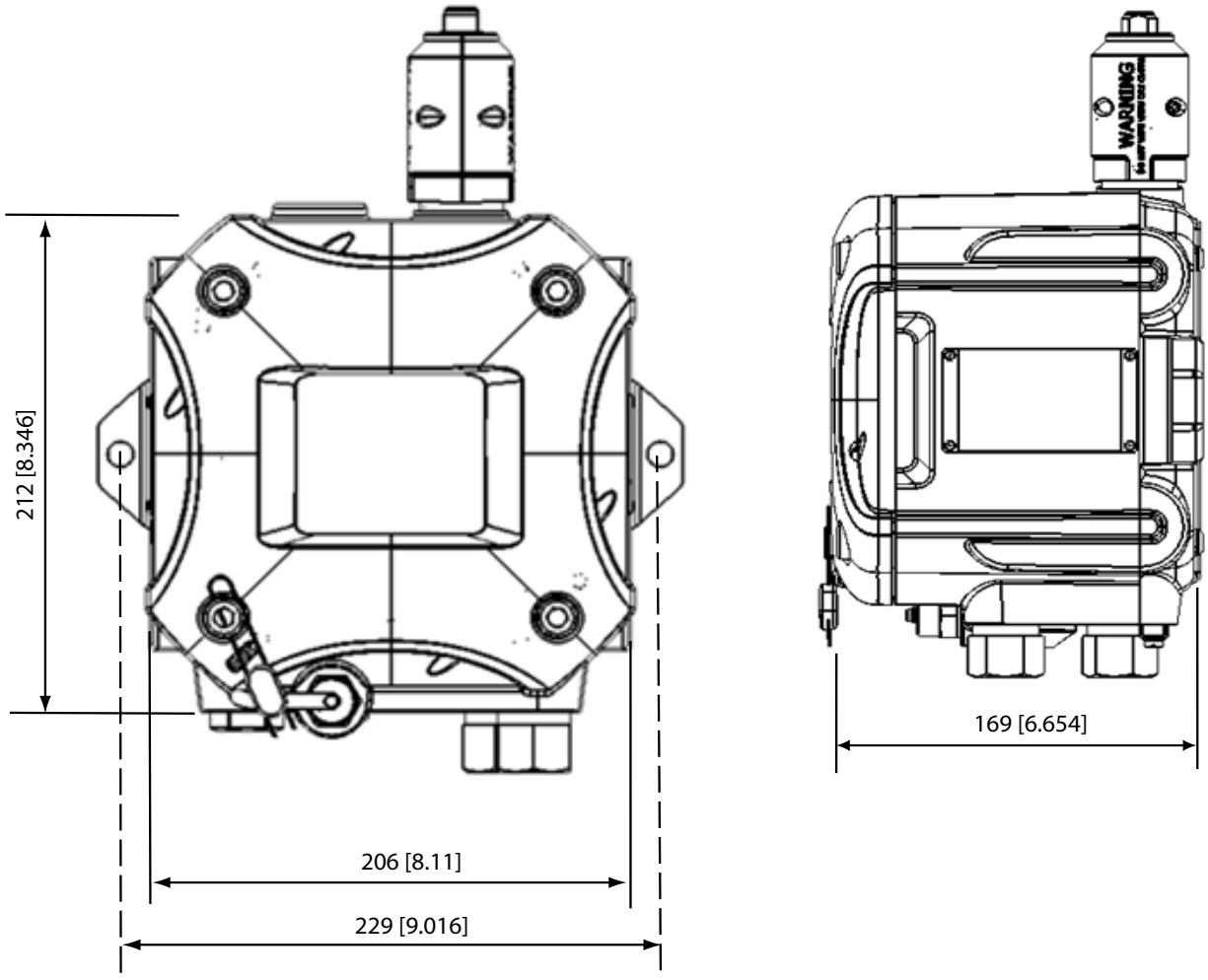


FIGURE 5-1 Main dimensions of the WFI in mm [inches]

Weight: Approximately 15 kilograms (529.11 ounces)

5.2 Fusing and Power Consumptions

5.2.1 Fusing

All fusing is performed internally on the CAN-PSX board (includes a 1.25A, 250V rating fuse). The CAN-PSX module powers the other 3 modules and so no external fusing is required.

NOTE: Fuse is not user replaceable. Contact Honeywell Enraf you need assistance with the fuse.

5.2.2 Power Consumption

Typical	Maximal
6.4W at 24V/ 230V I dc = 262mA I ac = 64.3 mA	7.4W (AC input) 6.48W (DC input)

NOTE: Ex certificates are invalidated if the total internal power dissipation exceeds 12 W.